The use of electricity and strychnia in the acute stage is obviously bad. Warm baths, splints for resting painful joints, protection from pressure of bed clothing for hyperesthesia are among the rational indications. To the orthopedist finally will go the majority of cases for resulting paralysis and the supervision of these cannot begin too soon.

Prognosis. Death occurs in 5% to 10% of severe cases—probably less than 5% of all abortive cases are recognized. Paralysis occurs in at least 50% to 90% of all reported cases and here, too, it may be that the smaller percentage was in epidemics where abortive cases were so frequently overlooked.

Paralysis, however bad at the beginning, may clear up entirely. Improvement generally takes place for six months, but no change for the better can be looked for after a year. Slightly paralyzed cases may not improve at all.

Resumé. What we know as acute anterior poliomyelitis is an acute infectious disease of unknown origin, occurring of late years in epidemics, small as compared to typhoid, diphtheria and scarlet fever epidemics but of about equal mortality. Like scarlet fever its virulence varies and while it is endemic in this state it rarely shows a strikingly virulent contageous tendency.

It is marked in abortive type by symptoms resembling nasal and tonsilar infection, with muscle, skin and joint pain, by gastro-intestinal symptoms, and finally in paralytic cases by flaccid paralysis of varying muscles in any part of the body.

Its recognition in the prodromal stage in the abortive type is almost impossible except in epidemics.

There is no specific treatment.

THE DIAGNOSIS OF TUBERCULOSIS OF THE SKIN.*

By D. FRIEDLANDER, M. D., San Francisco.

In the diagnosis of tuberculosis of the skin, we are confronted with a difficulty that we do not have to contend with in the gross pathological conditions of the same process in other organs of the body, inasmuch as we have, in tuberculosis of the skin, a variety of lesions which differ widely clinically, depending on the duration, intensity and evolution of the process, as well as the results of treatment. Not only in the clinical appearance does this wide variation occur, but also in the histological picture do we find the greatest latitude. On one side we will find cases in which the cutis and subcuticular tissue are thickly beset with typical tubercles, surrounded by inflammatory infiltration, with not infrequent tubercle bacilli; while, in other cases, we can only find an isolated tubercle, surrounded by fibrous tissue, and the most energetic search will not enable us to find a single bacillus. Since histopathological sections, showing the typical structure of the tubercle, are not a definite indication of tuberculosis, as similar infiltrations, showing giant cells, are found in other pathological entities, it has often been impossible to make a definite diagnosis from a biopsy, unless the causative agent, that is, the tubercle bacillus, can be found.

Were every case, clinically and histopathologically, a typical one, there would be no difficulty in making a definite diagnosis, but, unfortunately, the picture varies considerably both in the microscope and in gross appearance, and it is in the border line cases that we must exercise every possible endeavor to classify the lesion.

Were it possible, in every case, to find the tubercle bacillus, the diagnosis would be easy, but, unfortunately, it is often impossible to demonstrate the organism, and when found, to state the fact mildly, the number is exceedingly few. In fact, owing to the great difficulties presented in finding the bacillus, which was probably due to the insufficiency of our methods of investigation, it was seriously questioned whether or not certain polymorphous forms of atypical skin lesions, in reality tubercular in origin, were due to the tubercle bacillus, per se, or due to toxins, originating in a tuberculous process elsewhere in the body, and circulating in the blood; and, on this basis, these lesions were designated tuberculides or toxi-tuberculides.

The paucity of tubercle bacilli in skin lesions is probably due to the comparatively small amount of vascularization of the skin and the large amount of connective tissue present, which furnishes a much poorer medium for growth than the parenchyma of the lungs and other highly vascularized organs. This can be well demonstrated by the increased rapidity of progress that takes place when a comparatively indolent form of lupus vulgaris passes over from the skin to the mucous membrane.

However, in consequence of our knowledge of newer methods and better technic in the search for tubercle bacilli, we find that many clinical entities, some formerly classed as tuberculides, and some, where even the designation of tuberculide was disputed, are definitely due to the tubercle bacillus, and we can demonstrate the organism therein.

The methods employed in the diagnosis of tuberculosis of the skin may be classified as follows:

1. Clinical.
2. Animal inoculation.
3. Tuberculin test.
4. Histopathological.
5. Tinctorial.

The clinical appearances of the various tuberculous lesions can hardly be entered upon in a paper of this character; they differ, in their various manifestations exceedingly, but all have the characteristics of torpidity, infiltration, ulceration, and are not infrequently accompanied by other tuberculous lesions.

Animal inoculation, when positive, is practically certain, but, owing to the sparcity of the organism, or the lack of vitality thereof, or some unknown reason, it is not easy to procure positive results, except in the most pronounced cases, which can usually be recognized clinically. Furthermore, the

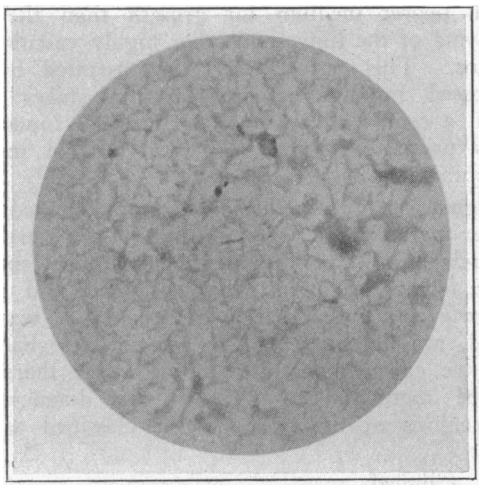
* Read before the Forty-Second Annual Meeting of the State Society, Del Monte, April, 1912.

method is inconvenient and one is compelled to wait some time for a report.

The tuberculin test, used in its various forms or methods, is frequently of service, but, in the great majority of cases the local reaction is lacking and a general reaction possesses little or no significance in the diagnosis of the lesion.

The histopathological examination, in the characteristic cases, presents the usual picture of tuberculosis elsewhere, characterized by the presence of an inflammatory infiltrate with central caseation and giant cells, but, without the tubercle bacilli, not only is this not characteristic of tuberculosis alone, but frequently, in the atypical forms, is absent or indefinite.

Finally, we have the tinctorial method, and the finding of acid-fast bacilli, staining with the Ziehl stain, showing a predilection for the giant cells, are, barring lepra, smegma and some other acid-fast bacilli, practically positive. Owing to the infrequence of the bacilli this has been extremely difficult, but within the last few years, two points have arisen which have considerably lightened the labor of finding the causative organism; they are the use of antiformin, and the discovery by Much, of Hamburg, of a Gram positive organism, which is resistant to antiformin, as only acid-fast organisms are, that occurs only in tuberculous lesions and discharges, occurring in conjunction with, but also without, the Ziehl staining tubercle bacillus.



The tissue to be examined is macerated with antiformin 10-15% and placed in an incubator for 8-24 hours, when the tissue will be digested, and then centrifugalized for 1-2 hours after adding alcohol 95% to the amount of 1/5 of the solution for the purpose of lowering the specific gravity of the solution and causing a better precipitate, and this also causes the material to adhere firmly to the slides. This procedure is carried out with all possible precautions to prevent the introduction of any extraneous organism.

The smear or section to be examined is then stained according to Much's modification of Gram's stain (see Much, Unna's Studium Bd., xxi, p. 95. (vol. ii, Unna's Festschrift)) or, better still, the modification of Weiss (Mitteilungen aus den Hamburgischen Staatskrankenanstalten Bd., xi, heft 9), which stains, simultaneously, the Ziehl staining form of the bacillus and the Gram positive form. The method of Weiss is as follows:

1. Sol. A. Saturated alcoholic solution of methyl violet B. N 10cc.
   Watery solution of carbolic acid 100 cc.
   Sol. B. Carbo-fuschsin.
   Solutions A and B to be combined, as used, in the proportion of 25% of A to 75% of B. This mixture is to be applied to the slide for 5 minutes over the flame, or 24-48 hours at room temperature.
2. Lugol's solution, 5-20 minutes cold, or heated until it steams.
3. Nitric acid 5% 1 minute.
4. Hydrochloric acid 3% 10 seconds.
5. Aceton alcohol until the color ceases to come off the slide.
6. Dry with filter paper.
7. Bismarck brown 10% 1 minute.
8. Wash and dry.

Cold staining is preferable to heating, and all stains should be repeatedly filtered before using, and the slides should be stained in the vertical position to avoid precipitate.

The Ziehl staining tubercle bacilli appear as with the ordinary Ziehl stain, while the Gram positive organisms of Much appear as a long, fine bacillus, the capsule of which is stained faintly red, containing 4-7 round, sharply defined granules, of varying size and dark blue color.

The Gram positive form is found in greater abundance than the Ziehl staining form (Hatano, Berlin Klin. Wochenschr., 1909, p. 1694), and is demonstrable in all tuberculous lesions of the skin, as well as the so-called tuberculides (see author British Journal of Dermat., Jan., 1912). Often, when the lesions show no Ziehl staining or Gram positive bacilli in section, they can be found in the antiformin treated smears, and the process is not too long or too difficult to be carried out in the average office. The question as to whether the Gram positive organism is a degenerated or a retrograde form of the Ziehl staining bacillus, of which it possesses all the morphological characteristics, is an unimportant one as long as we can confine its existence to tuberculous lesions, and this fact, together with the facts that it can be demonstrated in pure T. B. cultures, and in the peritoneal cavity of guinea pigs inoculated with pure cultures of T. B., practically demonstrates it to be what Much claims for it, a granular, Gram positive form of the tubercle bacillus, that does not take the Ziehl stain, as shown by the use of the Weiss method, which stains both forms simultaneously.

Thus we have the antiformin method, which dissolves the tissue, destroying all organisms that are not acid-fast, and enables us to find, more readily, the causative bacillus in tuberculous lesions, and the method of Much, which allows us to demonstrate a variety or condition of the tubercle bacillus, heretofore impossible.

In conclusion, it might be said that in the

diagnosis of tuberculosis of the skin, we must consider all factors, history, clinical appearance, animal inoculation, histopathological conditions and the tuberculin test, but, undoubtedly, the antiformin treatment of tissue, and the advent of the organism of Much have done more to clear up the diagnosis of obscure tuberculous skin conditions than all other methods combined.

SOCIETY REPORTS

THE CALIFORNIA ACADEMY OF MEDICINE.

The California Academy of Medicine held its regular meeting on Monday, November 25th.

The following scientific program was given:

1. Experimental and Clinical Notes on the Etiology of Diabetes Insipidus. Dr. H. A. Naffziger. Discussed by Drs. W. F. Schaller, W. W. Kerr, D. W. Montgomery, H. R. Oliver, A. J. Lartigau and H. A. Naffziger.

2. Enteroclysis in the Treatment of Weak Hearts. Dr. W. W. Kerr. Discussed by Drs. G. E. Ebright, J. B. Frankenheimer and W. W. Kerr.

3. The Course the Virus of Herpes Zoster takes to reach the Nerve Ganglion. Dr. D. W. Montgomery. Discussed by Drs. H. W. Allen, W. W. Kerr, W. F. Schaller, A. J. Lartigau, T. C. McCleave, L. S. Schmitt and D. W. Montgomery.

Refreshments were served at the close of the meeting.

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

The twenty-second annual meeting was held at Elks' Hall, Chico, November 19th, 1912.

The program was as follows:

Morning session, 10 o'clock:

Address of Welcome, Wm. Robbie, Mayor of Chico.

President's Annual Address, Dr. R. A. Peers, Colfax.

"Poliomyelitis from a Public Health Standpoint," Dr. Jas. H. Parkinson, Sacramento.

"The Health Insurance Acts in England," Dr. W. F. Snow, Sacramento.

"Vaccine and Serum Therapy in General Practice," Dr. D. H. Moulton, Chico.

Afternoon session, 2 o'clock:

"The Symptoms, Care and Treatment of Acute and Sub-Acute Alcoholism," Dr. R. E. Bering, San Francisco.

"The Treatment of Early Myocarditis," Dr. Geo. E. Ebright, San Francisco.

New officers elected: President, Dr. Dan Moulton, Chico; First Vice-President, Dr. G. H. Fay, East Auburn; Second Vice-President, Dr. Peery, Yuba City; Secretary, Dr. F. F. Gundrum, Sacramento; Treasurer, Dr. O. Stansbury, Chico.

There were about fifty physicians in attendance and the meeting was an unusually good one.

COOPER CLINICAL SOCIETY.

The Cooper Clinical Society held a meeting on the evening of December 3rd, at the Medical Department of Stanford University.

The following scientific program was given:

1. Milk Supply of San Francisco. Dr. W. H. Kellogg. Discussed by Drs. Langley Porter, Adelaide Brown and W. H. Kellogg.

2. Contribution of Certified Milk to Infant Feeding. (Illustrated by lantern slides showing the production of clean and of unclean milk.) Dr. Adelaide Brown. Discussed by Drs. A. B. Spalding, W. H. Kellogg, H. R. Oliver, Langley Porter and Adelaide Brown.

Refreshments were served at the close of the meeting.

GLENN COUNTY MEDICAL SOCIETY.

On November 21, a first meeting was called by the physicians of Glenn County for the purpose of organizing a county medical society. Dr. J. A. Randolph was chosen temporary chairman and Dr. F. M. Lawson temporary secretary. On November 27, another meeting was held at which time the society organized and adopted the constitution and by-laws recommended by the A. M. A. for county societies, and applied for affiliation with the State Society.

The Journal takes the greatest pleasure in extending to this youngest of our societies, sincere congratulations and the best of good wishes for a long and useful life. It starts out new with the New Year and may all its acts be worthy and profitable.

LONG BEACH PHYSICIANS' CLUB.

At the meeting of the club held in December the wives of the physician members were invited and the subject of the evening was an address by Dr. Stanley P. Black, of Pasadena, who discussed preventable diseases and public health matters generally.

MONTEREY COUNTY.

The officers elected to serve for 1913 by the Monterey County Medical Society are as follows: President, Dr. S. B. Gordon; Vice-President, Dr. A. M. Ritchie; Secretary, Dr. H. T. Crabtree; Treasurer, Dr. John Parker.

ORANGE COUNTY.

At the meeting for November, held Nov. 12, a paper on education in the hygiene of sex was read by Mr. R. J. Hamilton, secretary of the Orange County Y. M. C. A. The paper was discussed at length and a committee consisting of Dr. Ida Parker, Dr. John Wehrly and Dr. George Bryan was appointed to work with a committee of the Y. M. C. A. with the object of promoting the campaign for education on sex hygiene and instruction of children in a proper way on matters pertaining to sex.

SAN BERNARDINO COUNTY.

The November meeting was held on the 19th, at Redlands, and the program was made up of short papers on various phases of "Therapeutics," Drs. Tyler, Shreck, Folkins and Sanborn contributing. It was arranged that at the December meeting Mr. H. T. Morrow, the attorney for the State Society in southern California, should deliver a talk.

PROCEEDINGS OF THE SAN FRANCISCO COUNTY MEDICAL SOCIETY.

During the month of November, 1912, the following meetings were held by the San Francisco County Medical Society:

Section on Medicine, November 5, 1912.

1. Presentation of Cases. Dr. Milton B. Lennon.
   A. Multiple Neurofibromata (von Recklinghausen's Disease).
   B. Syringomyelia.

Discussed by Drs. H. C. McClenahan, L. Eloesser and M. B. Lennon.

2. Congenital Heart Lesion. (With demonstration of case). (To be published in the Journal, A. M. A.). Dr. George E. Ebright.

3. Interauricular or Interventricular Deficiency of Septum? A Question of Diagnosis. Dr. W. W. Kerr. (To be published in the Journal, A. M. A.).

Regular Meeting, November 12, 1912.

1. Rational Psychotherapy. Dr. H. C. McClenahan. (To be published in California State Journal).

2. Psychotherapy from the Standpoint of the